

# School of Computing & Engineering

## **Bachelor of Science in Civil Engineering**

2019-2020 Major Map: First Time College Student

#### Four Year Graduation Plan - Courses & Critical Benchmarks:

The following is a sample course of study. It is the Student's responsibility to ensure that all program requirements are met. This guide is not a substitute for academic advisement. For more information see the University Catalog at <a href="https://www.umkc.edu/catalog">umkc.edu/catalog</a>.

Your path to graduation may vary based on factors such as college credit you earned while in high school, transfer work from other institutions of higher learning, and placement in Mathematics. You are responsible for checking prerequisites to any courses. Critical Courses and minimum recommended grades (as noted below) provide feedback regarding major fit and help indicate likelihood of successful completion of chosen academic program and degree.

**Please Note:** Completing ENGLISH 110 (English Comp I) or COMM-ST 110 (Speech) or equivalents; SAT verbal 690; ACT English 30 or AP English Language/composite score of 4.2 **will waive the DISC 100 requirement.** 

Students must have successfully passed (with a "B" or better) Pre-calculus or a combination of a College Algebra and Trigonometry or have taken four (4) units of high school mathematics including trigonometry in high school to be prepared for major math sequence. Students who do not place into MATH 266: Accelerated Calculus I may have to complete preparatory math coursework, adding 3 – 8 hours to the total hours required for the degree.

First Math Course:		MATH 266 Accelerated Calculus I	Foreign Language Requirement:	None		General Elective Hours:	None	
Critical Course	Со	urse Subject, Number, & Title and Academic <b>Bold = UMKC General Education Core</b> ** Co-Requisite Enrollment Requ	requirement	Min. Recom. Grade	Credit Hours	Notes		
Fall Semo	ester Yea	r 1: 16 hours						
$\Diamond$	**CHEM 211/211L General Chemistry plus Lab			В	5			
<b>\rightarrow</b>	MATH 266 Accelerated Calculus I <sup>1</sup>			В	4	<sup>1</sup> Enrollment restricted. Must take		
	**DISC 100 Reasoning & Values² (Speech & Writing) Click for options				3	ALEKS Math Placement Exam or show prerequisite requirement ha		
	**ANCHOR I Reasoning & Values Click for Options (ANCH 150 Computing & Engineering in Society Recommended)  Complete Shop Safety Course (see advisor for options)				3	been met prior to enrolling.		
					1	<sup>2</sup> If DISC 100 is waived, MEC-ENGF 130 recommended.		
	Complete 16 term credit hours.  Must earn minimum 2.00 term and cumulative GPA.					190 19091111119/14041		
Spring So	emester `	Year 1: 17 hours						
$\Diamond$	MATH	268 Accelerated Calculus II		В	3	³PHYSICS 240 Required for		
$\Diamond$	PHYSI	CS 240 Physics for Science & Engineering I <sup>3</sup>	(Focus B)	В	5			
	MEC-ENGR 130 Engineering Graphics				3	degree, may not sub PHYSICS 210.	stitute	
	CIV-EN	NGR 111 First Year Cornerstone			3	   4HISTORY 101, 102	or POL-SCI	
	(HISTO	C Human Values & Ethical Reasoning Clic ORY 101, 102, or POL-SCI 210 recommende			3	210 meet both Focus C & Missouri Constitution Requirements.		
	Complete 17 term credit hours.  Must earn minimum 2.00 term and cumulative GPA.							
Summer	Semeste	r Year 1: 0 hours						
Complete 33 hours towards degree.  Maintain 2.00 minimum GPA.  Complete ANCHOR I & DISC 100.				May use summer ter or spring course load catch-up on math co	ds, or to			

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Fall Semester Year 2: 16 hours					
MATH 250 Calculus III	В	4			
CIV-ENGR 275 Engineering Statics	В	3			
E&C-ENGR 216 Engineering Computation		4	5PHYSICS 250 Required for		
PHYSICS 250 Physics for Science & Engineering II <sup>5</sup> (Focus Elective)	В	5	degree, may not substitute PHYSICS 220.		
Complete 16 term credit hours.  Must earn minimum 2.00 term and cumulative GPA.					
Spring Semester Year 2: 16 hours					
MATH 345 Differential Equations	В	4			
CIV-ENGR 276 Strength of Materials	В	3			
CIV-ENGR 351 Fluid Mechanics		3	Take the RooWriter Assessment		
**DISC 200 Culture & Diversity (Speech & Writing) Click for options		3	after completing DISC 200 and before reaching 90 credit hours.		
**ANCHOR II Culture & Diversity Click for options		3			
Complete 16 term credit hours.  Must earn minimum 2.00 term and cumulative GPA.	aplete 16 term credit hours.				
Summer Semester Year 2: 3 hours					
Complete 65 credit hours towards degree. Complete ANCHOR II & DISC 200 Maintain 2.00 minimum GPA.	May use summer term to lighten fall or spring course loads, or to catch-up on math coursework.				
Fall Semester Year 3: 17 hours			catch-up on math coursework.		
CIV-ENGR 319 Engineering Computation & Statistics		3			
CIV-ENGR 321 Structural Analysis		4			
CIV-ENGR 378WI Civil Engineering Materials		3			
CIV-ENGR 467 Construction Management		3			
Complete Fundamentals of Surveying (see advisor for options)		1			
Focus A Arts & Humanities Click for options		3			
Complete 17 term credit hours.  Must earn minimum 2.00 term and cumulative GPA.		•			
Spring Semester Year 3: 16 hours					
CIV-ENGR 335 Soil Mechanics		3	Complete the Fundamentals of		
CIV-ENGR 318 Geographic Info Sys for Engineers		3	Engineering (FE) exam.		
CIV-ENGR 497 Engineering Hydrology		3	Complete the HEIghten exit exam.		
CIV-ENGR Click for options		3	Complete the OSHA Construction		
CIV-ENGR Click for options		3	Safety course online.  Apply for graduation.		
Complete 15 term credit hours.  Must earn minimum 2.00 term and cumulative GPA.					
Summer Semester Year 3: 0 hours					
Complete 98 credit hours towards degree. Complete RooWriter Assessment Maintain 2.00 minimum GPA.	May use summer term to lighten fall or spring course loads.				

Fall Semester Year 4: 14 hours				
CIV-ENGR 411 System Design I	2			
CIV-ENGR 422WI Reinforced Concrete	3			
CIV-ENGR 432 Foundation Engineering	3			
CIV-ENGR 3XX/4XX Elective Click for options	3	Complete Senior Exit Survey.		
CIV-ENGR 3XX/4XX Elective Click for options	3			
Complete 14 term credit hours.  Must earn minimum 2.00 term and cumulative GPA.				
Spring Semester Year 4: 15 hours				
CIV-ENGR Click for options	3			
CIV-ENGR 3XX/4XX Elective Click for options	3			
CIV-ENGR 3XX/4XX Elective Click for options	3			
ANCHOR 311 System Design II	3			
DISC 300 Civic & Community Engagement	3			
Complete 15 term credit hours.  Must earn minimum 2.00 term and cumulative GPA.				

Graduation Requirements Summary						
Total Hours	Total Hours at UMKC	Upper Lvl Hrs in Major at UMKC	Total Upper Level (300/400) hours	Major GPA	UMKC GPA	
126	30 minimum	12 minimum	36 minimum	2.00 minimum	2.00 minimum	

#### **Other Information**

A minimum of 30 hours must be earned at the University of Missouri-Kansas City, regardless of the number and level of hours earned at another institution. Undergraduate degree-seeking students are required to earn credit in at least 36 credit hours of coursework numbered 300 and above at UMKC. In the case of transfer credit, the coursework must be numbered as junior-senior level work by the transferring institution.

Non-course requirements	Met
Missouri Higher Education Civics Achievement Examination	
RooWriter Assessment	
HElghten exit exam	
Civil Engineering Department Senior Exit Degree Completion Survey	
OSHA Construction Safety 10 Hour Course (online)	

### **Policy**

The University reserves the right to make changes in courses and course schedules without notice. Students are expected to maintain a quality of achievement significantly above minimum UMKC standards for degree work. Individual student progress will be monitored throughout the program. Satisfactory progress is required of all students for retention in the program. Students are expected to maintain academic standards, perform satisfactorily in courses, refrain from academic dishonesty, comply with the established University requirements, and refrain from unethical or unprofessional behavior or behaviors that obstruct the training process or threaten the welfare of the student or others. Other circumstances involving student behavior will be addressed by the faculty on an individual basis.

## **Advising Contact Information**

UMKC School of Computing & Engineering DST Student Services Center 336 Flarsheim Hall 5110 Rockhill Road

Kansas City MO 64110 816-235-2399 sce@umkc.edu http://sce.umkc.edu

## **Career Opportunities**

UMKC Career Services – <u>career.umkc.edu</u> | 816-235-1636 | 2<sup>nd</sup> Floor, Atterbury Student Success Center O\*Net OnLine – <u>OnetOnline.org</u> Learn about careers related to your major, income potential, and more.